

UNC CURRICULUM VITAE

March 30, 2004

JOHN R. ZUNIGA, DMD, MS, PhD.

EDUCATION

<u>Institution and Location</u>	<u>Degree</u>	<u>Degree Major</u>
University of Rochester, Rochester, NY	Ph.D.	Neuroscience
University of Rochester, Rochester, NY	M.S.	Neuroscience
University of Rochester, Strong Memorial Hospital	Residency Certificate	Oral and Maxillofacial Surgery
University of Rochester, Strong Memorial Hospital	Residency Certificate	General Dental
Tufts University School of Dentistry, Boston, MA	D.M.D.	Dentistry
LeMoyne College Syracuse, NY	B.S.	Biology

NATIONAL CERTIFICATION

--- Diplomate, American Board of Oral and Maxillofacial Surgeons

ACADEMIC OR PROFESSIONAL APPOINTMENTS

2003	Visiting Professor, Department of Oral and Maxillofacial Surgery, Department of Hospital Dentistry, University of Iowa Hospitals and Clinics, Iowa City, Iowa
1998	Professor, Department of Oral and Maxillofacial Surgery, School of Dentistry, University of North Carolina.
1995	Visiting Professor, Medical Faculty Department of Maxillofacial Surgery, University of Vienna, Vienna, Austria
1995	Co-Director, Oral and Maxillofacial Pain Program, University of North Carolina, School of Dentistry.
1993-1998	Associate Professor, Permanent Tenure, Department of Oral and Maxillofacial Surgery, School of Dentistry, University of North Carolina
1992	Graduate Program Director, Department of Oral and Maxillofacial Surgery, University of North Carolina, School of Dentistry

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| 1986-1993 | Assistant Professor, Department of Oral and Maxillofacial Surgery, University of North Carolina, School of Dentistry |
| 1982-1986 | Research Assistant, The Neuroendocrine Unit, University of Rochester, School of Medicine and Dentistry |
| 1983-1986 | Clinical Instructor in Dentistry, Department of Clinical Dentistry, University of Rochester, Strong Memorial Hospital |

HOSPITAL APPOINTMENTS

- Attending Staff, The North Carolina Memorial Hospital, Chapel Hill, NC
- Consultant, Medical Staff, Dorothea Dix Hospital, Raleigh, NC
- Dentist/Consultant, Oral and Maxillofacial Surgery, Veterans Administration Hospital, Fayetteville, NC
- Attending Staff, Carolinas Medical Center, Charlotte, NC
- Visiting Professor, Clinic for Maxillofacial Surgery, General Hospital for the University of Vienna, Vienna, Austria
- Consultant and Attending, Oral and Maxillofacial Surgery, Medical Staff, Department of Veterans Affairs, Medical Center, Durham, North Carolina
- Visiting Professor, Department of Hospital Dentistry, University of Iowa Hospitals, Iowa City, Iowa

SOCIETY MEMBERSHIPS

- Omicron Kappa Upsilon, Xi Xi Chapter
- American Dental Society of Anesthesiology
- American Dental Association
- American Association of Oral and Maxillofacial Surgery
- International Association for Dental Research
- Neuroscience Society
- American Association of Dental Research
- Association for Chemoreception Sciences
American Association for Advancement of Science

NC Society of Oral and Maxillofacial Surgeons

American Society of Temporomandibular Joint Surgeons

Vikings Study Club, International Study of Oral and Maxillofacial Surgery

HONORS & AWARDS

---	Omicron Kappa Upsilon
1978	American Dental Society of Anesthesiology Award
---	American Association of Oral and Maxillofacial Surgeons Research Fellowship Award
1985	Buonocore Award for Research
1985	Merck, Sharp and Dohme Award for Research
1985	National Institute of Health National Research Service Award
1987	University of North Carolina, Junior Faculty Development Award
---	American Association for Dental Research, Student Research Fellowship, sponsor.
---	American Association for Dental Research, Student Research Fellowship, sponsor.
---	American Association of Dental Research, --- Student Research Fellowship, sponsor.
---	American Association of Dental Research, Student Research Fellowship, sponsor.
1998	Oral and Maxillofacial Surgery Foundation, Daniel M. Laskin Award for Most Outstanding Publication
2002	Oral and Maxillofacial Surgery Foundation, Research Recognition Award

COMMITTEE APPOINTMENTS & CONSULTANT POSITIONS

Dental School

1987-1988	Career Planning Committee, Member, UNC
1989-1992	Promotions and Tenure Committee, Member, UNC
1989-1990	Committee to Review Basic Sciences, Member, UNC
1990-1996	Clinical Research Unit Planning Committee, Member, UNC
1991	3rd and 4th Year Teaching Committee, Member, UNC
1992	Search Committee, Chair, Dept. of Endodontics, Member, UNC

1993-1996 Administrative Board of the School of Dentistry, Member, UNC

1992-1996 Research Advisory Committee, Member, UNC

1992 Advanced Education Program Directors Committee, Member, UNC

1996 Dental Faculty Practice Executive Board, member, UNC

1998 Full Professors' Committee, member, UNC

2000 Search Committee, Chairman, Dept. of Hospital Dentistry,
Member

2000-2003 Administrative Board of School of Dentistry, Member

University

1987-1992 Medical Records Committee, Member Department of Dentistry Representative

1992 Department of Surgery Division Chiefs, Department
of Oral and Maxillofacial Surgery Representative

1998 UNC Faculty Council, Professor and Associate Professor for UNC School of Dentistry

National

1994 Clinical Interest Group, Maxillofacial Neurologic
Disorders, American Association of Oral and
Maxillofacial Surgeons. Secretary-Treasurer (1995-1997), Vice-Chairman (1997-1999),
Chairman (2000 – 2002)

1999-2002 Site Visit Consultant to ADA Commission on Dental Education, The Committee on
Residency Education and Training, AAOMS, Rosemont, IL

2000 Board Examiner, American Board of Oral and Maxillofacial
Surgeons, Section IV

2003 Research Council, Oral and Maxillofacial Surgery Foundation, Rosemont, IL

2003 Special Government Employee, Dental Products Panel of the Medical Devices Advisory
Committee, Center for Devices and Radiological Health, Food and Drug Administration,
Rockville, MD

2004 Co-Chair, Section IV, Anesthesia and Medicine, American Board of Oral and
Maxillofacial Surgeons

PRESENTATIONS

1980 – 1989

- 1982-1985 Head and Neck Spaces, Department of Anatomy, University of Rochester School of Medicine
- 1983-1984 Clinical Correlations of the Temporomandibular Joint, Department of Anatomy, University of Rochester School of Medicine
- 1983-1985 Fluid and Electrolyte Balance in the Surgical Patient, Department of Clinical Dentistry, The Genesee Hospital, Rochester, NY
- 1983 The Effects of Nitrous Oxide on the Central Endogenous Opioid System, Northeast Society of Oral and Maxillofacial Surgeons, Connecticut
- 1985 The Medial Basal Hypothalamus, Theory of Nitrous Oxide Narcosis, Department of Anesthesiology, University of Rochester, Strong Memorial Hospital
- 1985 The Neuroanatomical, Neurophysiological Implications of Salivary Gland Function, Department of Dental Research, Eastman Dental Center, Rochester, NY
- 1985 The Release and Recovery of Beta Endorphin After Exposure to Nitrous Oxide, New York Society of the American Association for Dental Research, Rochester, NY
- 1986 Introduction to Pain, Department of Dental Research, University of Rochester, Rochester, NY
- 1986 A Comparative Analysis of Primary and Secondary Microneuroanastomotic Repair of the Mental Nerve, Ninth International Conference on Oral and Maxillofacial Surgery, Vancouver, Canada
- 1987 Oral and Maxillofacial Surgery, Alpha Epsilon Delta International Premedical Honor Society, University of North Carolina at Chapel Hill, NC
- 1988 Regenerative Organization of the Trigeminal Ganglia After Nerve Section and Repair, Curriculum of Neurobiology, University of North Carolina at Chapel Hill, NC
- 1988 Clinical Pharmacology of Medical Emergencies and Infections in Dental Practice, First Annual Roy B. Harrell Continuing Education Symposium
- 1989 Diagnosis and Treatment of Trigeminal Nerve Injuries, The Third Ernest W. Small Lecture
- 1989 Challenging Neurosensory Impairment: The Trigeminal Nerve, UNC Dental Alumni Association Continuing Education Program
- 1990 - 1999
- 1990 Microsurgical Repair of Orofacial Nerve Injuries, Department of Surgery, University of North Carolina, School of Medicine, Chapel Hill, NC
- 1990 Chronic Pain, Peripheral Nerve Injury and Clinical Pharmacology of Medical Emergencies and Infections in the Dental Office, Pinehurst Seminars, Pinehurst, NC
- 1991 Advances in Microsurgical Nerve Injury, Oral Surgery for the General Dentist, Chapel Hill, NC

- 1991 Mechanisms of Chronic Oral Facial Pain, Fourth Annual Roy B. Harrell Continuing Education Symposium, Chapel Hill, NC
- 1991 Neuroanatomy of the Maxillofacial Region and the Patient with Paresthesia, Charlotte Area Health Education Center and the UNC School of Dentistry, Charlotte, NC
- 1991 Common Medical Emergencies and Their Management in the Dental Office, Diagnostic Sciences Evening Series, Chapel Hill, NC
- 1992 A Contemporary Application to Patients with Orofacial Nerve Injuries, Fayetteville Area Health Education Center, Fayetteville, NC
- 1992 Painful Neuralgias of the Head and Neck, Fayetteville Area Health Education Center, Fayetteville, North Carolina
- 1993 Microneurosurgery for Oral and Maxillofacial Surgeons, Massachusetts General Hospital, Boston, Massachusetts
- 1994 Nerve Injuries in the Orofacial Region, Forsythe Dental Society, Forsythe Area Health Education Center, Winston-Salem, North Carolina
- 1994 Painful Neuralgias of the Head and Neck, Gastonia Area Health Education Center, Gastonia, NC
- 1994 Management of Perioral Nerve Injuries, Mecklenburg Dental Society, Mecklenburg Area Health Education Center, Charlotte, NC
- 1991 Temporomandibular Joint Arthrocentesis, Department of Surgery, University of North Carolina, School of Medicine, Chapel Hill, NC
- 1991 Neuroanatomy of the Maxillofacial Region, The Charlotte Area Health Education Center, Carolinas Medical Center, Charlotte, NC
- 1991 The Patient with Paresthesia, The Charlotte Area Health Education Center, Carolinas Medical Center, Charlotte, NC
- 1991 Mechanisms of Chronic Oral Facial Pain, 4th Annual Roy B. Harrell Continuing Dental Education Symposium, The University of North Carolina, Chapel Hill, NC
- 1991 Chronic Pain, Peripheral Nerve Injury and Clinical Pharmacology of Medical Emergencies and Infections in the Dental Office, Pinehurst Seminars, Pinehurst, NC
- 1992 Update on Trigeminal Neuralgia, Butler Ross Study Club, Durham, NC
- 1992 Clinical Neurosensory Examination, American Association of Oral and Maxillofacial Surgeons 74th Annual Meeting, Surgical Round Table Clinic, Honolulu, Hawaii
- 1992 Long-Term Outcome Following Trigeminal Microneurosurgery, The Ohio State University, Oral and Maxillofacial Department, Columbus, Ohio

- 1993 Nerve Injuries of the Oral and Maxillofacial Region, The University of Rochester, Oral and Maxillofacial Surgery Department, Rochester, NY
- 1993 The patient with Traumatic Hyperalgesia and Sympathetic Mediated Pain, American College of Oral and Maxillofacial Surgeons, First World Conference, Boston, Massachusetts
- 1993 Managing Orofacial Neuralgic and Neuropathic Pain in the 90's, Southwest Virginia Dental Association, Marion, VA
- 1995 How to Determine and Support Normal Nerve Recovery, 1995 Mid-Winter Conference, AAOMS, Orlando, FL
- 1995 Trigeminal Nerve Microsurgery, Dept. of Surgery, Division of Plastic and General Surgery, AKH, University of Vienna, Vienna, Austria
- 1995 Therapy for Neurosensory Disorders of the Head and Neck, University Clinic for Dentistry, University of Vienna, Austria
- 1995 TMD and Nerve Injury, Moderator, Oral Abstract Session 13, AAOMS 77th Annual Meeting and Scientific Session, Toronto, Canada
- 1995 Nerve Injuries in the Orofacial Region, Lee/Chatham County Dental Society, Area Health Education Center, Sanford, NC
- 1995 Challenges in Oral and Maxillofacial Surgery, Guilford County Dental Society, Greensboro, NC
- 1996 Management of Nerve Injuries, Durham-Orange County Dental Society, Durham, NC
- 1996 Nerve Injuries in the Orofacial Region - Painful Neuralgias of the Head and Neck, Mountain Area Health Education Center, Asheville, NC
- 1996 Diagnosis, Prevention and Management of Trigeminal Nerve Disorders. An Intensive Course in Microsurgical Technique, Harvard School of Dentistry, Boston, MA
- 1996 The Salzburg Trauma, Reconstruction and Orthognathic Surgery Systems, Department of Oral and Maxillofacial Surgery, Howmedics Leibinger, Inc., School of Dentistry, The University of North Carolina, Chapel Hill, NC
- 1996 Surgical Approach to TMJ, Coastal Area Health and Education Center, Wilmington, NC
- 1996 Microsurgery of the Trigeminal Nerve: Cadaver Workshop. Dept. of Oral and Maxillofacial Surgery, UMDNJ – New Jersey Dental School, March 29 – 31.
- 1996 Microsurgical Technique Course for Oral and Maxillofacial Surgeons, Department of Oral and Maxillofacial Surgery, UNC School of Dentistry, School of Medicine, UNC Hospitals, April 30 – May 2.
- 1994 The Regenerative Neurobiology of Human Taste, 30th Annual Dental Students Conference on Research, April 16-19, 1994, School of Dentistry, University of North Carolina

- 1996 Nerve Injuries, Guy Willis Dental Study Club, Durham, NC, May 1, 1996
- 1996 Augmented Reality Environment Technology in Oral Maxillofacial Surgery, Surgery Grand Rounds, Dept. of Surgery, UNC, School of Medicine
- 1996 Lingual Regeneration, Chicago Association of Oral and Maxillofacial Surgeons, Chicago, Illinois
- 1996 3-D Modeling, Navigational CT, Virtual and Augmented Reality in Maxillofacial Surgery, ACOMS, Philadelphia, PA
- 1997 Management of Neurological Disorders, Reactor, Oral Abstract Session 8, 79th Annual Meeting and Scientific Session, Seattle, Washington
- 1998 Neuroregenerative Biology of Human Taste, Dept. of OMS, The Ohio State University, Columbus, Ohio
- 1998 Regenerative Biology of Taste in Humans, Dept. of OMS, The University of Washington, Seattle, Washington
- 1998 Taste Disorders in Oral and Maxillofacial Surgery, Dept. of OMS, Univ. of Rochester, The Genesee Hosp., Rochester
- 1998 Guidelines for Post-operative Neurosensory Disorders in Oral and Maxillofacial Surgery, Dept. of OMFS, William Beaumont Army Medical Center, El Paso, TX
- 1998 The Treatment of Temporomandibular Disorders in Patients with Chronic Pain, New York Dental Society, Third District Dental Society, Albany, NY
- 1998 Clinical Trials in Oral-Facial Neurotrauma, Dept. of OMS, University of Michigan, School of Dentistry, Ann Arbor, MI
- 1998 Surgical Modalities: Treatment of TMD, Coastal Area Health and Education Center, Wilmington, NC
- 1998 Endodontic Induced Neuropathy, Randolph County Dental Society, Asheboro, NC

2000 - 2004

- 2000 Guidelines in the Treatment in Peri-oral Nerve Injuries: What, When, How Much, and Why. Society of OMS Annual Meeting, Des Moines, Iowa
- 2000 Nerve Injuries, AAOMS, 82nd Annual Meeting, San Francisco, CA
- 2000 Moderator, Prevention and Treatment of Complications of Mandibular Implants, CIG Educational Program, San Francisco, CA

- 1999 Visiting Professor, Montefiore Medical Center/Albert Einstein College of Medicine, “Assessment and Treatment of Neurologic Injuries of the Maxillofacial Region”, Bronx, NY
- 2000 Guidelines for Treatment of Perioral Nerve Injuries, Iowa Society of Oral and Maxillofacial Surgeons Annual Meeting, May 7, 2000, Des Moines, Iowa
- 2000 Nerve Injuries: A Clinician’s Guide to Diagnosis and Management. Indiana University Dept. of oral and Maxillofacial Surgery, Medicine, and Pathology, June 10, 2000, Indianapolis, Indiana
- 2002 Oral and Maxillofacial Microsurgery, The Oral and Maxillofacial Surgery Practice, Myrtle Beach, SC
- 2003 Management of Temporomandibular Joint Disorders, Mountain AHEC, Asheville, NC
- 2001 Randomized, Masked, Placebo-Controlled Clinical Trial of a Fast-Absorbing Oral Analgesic on Acute Dental Pain, University of Indiana, Indianapolis, IN
- 2001 Disinhibition of Endogenous Pain Modulation by Chronic Recalcitrant TMD Pain, Amer Assoc TMJ Surgeons, San Diego, CA
- 2002 Diclofenac Potassium Softgel Clinical Trial Dental Pain Study, aaiPharma, Inc. New Orleans, LA
- 2002 Short-term Sensory Impairment after Orthognathic Surgery, Austrian Society of Oral & Maxillofacial Surgeons, Semmering, Austria
- 2002 Maladaptive Pain Modulation by Chronic Recalcitrant TMD Pain, Austrian Society of Oral & Maxillofacial Surgeons, Semmering, Austria.
- 2003 Current Advances in the Management of Oro-facial Pain. The Zurkow Lecture. “Contemporary Management of the Recalcitrant TMD Patient,” University of Pennsylvania, Philadelphia, PA.
- 2003 Facial Nerve Injuries: “When Numbness Hurts”. The Charles R. Jerge Dental Seminar, 24th annual seminar. The Department of Dentistry of Wake Forest University School of Medicine, Myrtle Beach, South Carolina
- 2003 Use of Contemporary Medications for Postoperative Dental Pain, The Department of Hospital Dentistry and Oral and Maxillofacial Surgery, Chapel Hill, NC, Oct 15, 2003
- 2003 Guidelines for the Management of Acute Pain in Oral and Maxillofacial Surgery, Department of Oral and Maxillofacial Surgery, Fort Bragg and Army Program, Fayetteville, NC

- 2003 Use of Contemporary Medications for Postoperative Dental Pain, Department of Hospital Dentistry, UNC Dentistry and Hospitals, Chapel Hill, NC
- 2004 Management of TMD and Chronic Pain in Oral and Maxillofacial Surgery, Department of Oral and Maxillofacial Surgery, Fort Bragg and Army Program, Fayetteville, NC
- 2004 Management of Temporomandibular Joint Disorders, Wake AHEC, Raleigh, NC

INVITED SYMPOSIUMS

- 1993 Symposium on Neurologic Disorders, invited speaker, 1993 First World Conference of the American College of Oral and Maxillofacial Surgeons, Boston, Massachusetts
- 1996 Symposium on Innovative Technology in Oral and Maxillofacial Surgery, invited speaker, 1996 Annual Meeting of the American College of Oral and Maxillofacial Surgeons, Philadelphia, Pennsylvania
- 1997 Failed TMJ Implant Workshop, invited participant, National Institute of Dental Research, Bethesda, Maryland
- 1997 Symposium on musculoskeletal and Neuropathic Pain: Understanding the Common Ground, invited speaker, AAOMS 79th Annual Meeting, Seattle, Washington
- 1998 Guidelines in the Treatment of Nerve Injuries: What, When, How much, and Why. Invited speaker. 142nd annual session, North Carolina Dental Society, Myrtle Beach, SC
- 1999 Pain Management in Oral and Maxillofacial Surgery: Meeting ADA Guidelines and Patient Needs. Pain Management Consensus Conference, invited speaker, NYC, NY
- 2000 Symposium on Managing the Patient with Intractable Temporomandibular Joint and Facial Pain, AAOMS, 82nd Annual Meeting, San Francisco, CA
- 2001 Neurosensation and Orthognathic Surgery, in Orthognathic Surgery and Orthodontics: The Third Millenium, Atlanta, Georgia, invited speaker
- 2002 Nerve Injuries for Oral and Maxillofacial Surgeons: Clinical Problems and Solutions, Connecticut Society of Oral and Maxillofacial Surgeons 35th Annual Educational Symposium, Westbrook, CT
- 2002 Immediate Trigeminal Nerve Reconstruction in Benign Tumor Surgery of the Mandible, in "Interdisciplinary Problem Solving in Cranio-Maxillofacial Surgery, Charlotte, NC
- 2002 Salzburg Lag Screw Trauma System, in "Interdisciplinary Problem Solving in Cranio-Maxillofacial Surgery, Charlotte, NC
- 2002 Symposium on Neural Complications in Dentoalveolar Surgery, AAOMS, 84th Annual Scientific Sessions and Exhibition, Chicago, IL
- 2003 The Clinical Applications of the Basic Sciences, The University of Rochester, First All-Alumni Reunion and Symposium, Naples, FL

- 2003 Rapid Absorption Pharmacokinetic Therapy for Acute Oral Pain, Symposium Innovation der Cranio Maxillofacialen Chirurgie, Allgemeines Krankenhaus der Stadt Wien, Vienna, Austria
- 2004 Temporomandibular Joint Reconstruction with the TMJ Concepts Implant System. The Small-Terry-Baker Lecture, University of North Carolina at Chapel Hill, NC

JOURNAL EDITORIAL ASSIGNMENTS

- 1988 Pharmacological Reviews: Ad Hoc
- 1988-1991 Anesthesia Progress: Ad Hoc
- 1991 Chemical Senses: Ad Hoc
- 1991 Anesthesia Progress: Editorial Review Board
- 1992 Journal of Oral & Maxillofacial Surgery: Ad Hoc
- 1992 Oral Surgery, Oral Medicine, Oral Pathology: Ad Hoc
- 1995 Critical Reviews in Oral Biology and Medicine: Ad Hoc
- 1995 Archives of Oral Biology: Ad Hoc
- 1997 Journal of Dental Research: Ad Hoc
- 2000 Brain Research: Ad Hoc
- 2000 Editor, Oral and Maxillofacial Surgery Clinics of North America, Saunders Company, "Clinical Trials in Orofacial Neurotrauma" edition

PUBLICATIONS

Journal Articles

1. *Zuniga, J.R.; Holmes, H.I.; and Page, L.
Myelofibrosis of the facial bones. Oral Surgery, 56:32-38, 1983.
2. *Zuniga, J.R.; Knigge, K.M.; Joseph, S.A. Central
beta endorphin release and recovery after exposure to nitrous oxide
in rats. J Oral Maxillofac Surg, 44:714-718, 1986.
3. *Zuniga, J.R.; and O'Connor, B. Primary and secondary
microneuroanastomotic repair of the mental nerve in the rat. Int J
Oral Maxillofac Surg, 16:465-472, 1987.
4. *Zuniga, J.R.; Joseph, S.A.; Knigge, K.M. The effects
of nitrous oxide on the central endogenous pro-opiomelanocortin

system in the rat. Brain Res, 430:57-65, 1987.

5. *Zuniga, J.R.; Joseph, S.A.; Knigge, K.M. The effects of nitrous oxide on the secretory activity of pro-opiomelanocortin peptides from basal hypothalamic cells attached to cytodex beads in a superfusion in vitro system. Brain Res, 420:66-72, 1987.
6. *Harnish, P.P.; Zuniga, J.R.; Northington, F.K.; Melrose, P.A.; Joseph, S.A.; Kido, D.K.; Knigge, K.M. Effect of contrast media (CM) on beta-endorphin secretion. Acta Radiologica, 29:741-743, 1988.
7. *Zuniga, J.R.; Joseph, S.A.; Knigge, K.M. Nitrous oxide: partial antagonism by naloxone and total reversal after periaqueductal gray lesions in the rat. European J Pharm, 142:51-60, 1987.
8. *Zuniga, J.R.; Pate, J.; Hegtvedt, A.K. Regenerative organization of the trigeminal ganglion following mandibular nerve section and repair in the adult rat. J Comp Neurol, 295:548-558, 1990.
9. *Maixner, W.; Gracely, R.H.; Zuniga, J.R.; Humphrey, C.B.; Bloodworth, G.R. Cardiovascular and somatosensory responses to forearm ischemia and dynamic hand exercise. Am J Physiol, 259:R1156-R1163, 1990.
- 10 *Hegtvedt, A.K.; Zuniga, J.R. Lingual nerve injury as a complication of rigid fixation of the sagittal split osteotomy: report of a case. J Oral Maxillofac Surg, 48:647-650, 1990.
- 11 *Zuniga, J.R. Studies of traumatic neuralgias in the maxillofacial region: surgical and neural mechanisms; discussion. J Oral Maxillofac Surg, 48:238-239, 1990.
12. *Giammara, B.; Anderson, E., Yates, P., Zuniga J. and Hanker, J. Use of a biodegradable neuoprosthesis containing laminin for avulsive peripheral nerve injury results in early endoneurial and perineurial collagen Type III formation. Proceeding of the XIIth Int. Congress for Electron Microscopy, 1990, pp. 158-159.
13. *Carter, T.B.; Frost, D.E.; Tucker, M.R.; Zuniga, J.R. Cortical thickness in human mandibles. Int J Adult Orthod Orthog Surg, 6:251-260, 1991.
14. *Zuniga, J.R. Normal responses to nerve injury: histology and psychophysics of degeneration and regeneration. OMFS Clin North Amer, 4:323-337, 1992.
15. *Zuniga, J.R.; Essick, G. A contemporary approach to the clinical evaluation of trigeminal nerve injuries. OMFS Clin North Amer, 4:353-367, 1992.
16. *Zuniga, J.R.; Hegtvedt, A.K.; Alling, C. Future

applications in the management of trigeminal nerve injuries. OMFS Clin North Amer, 4:543-554, 1992.

17. *Suarez-Roca, H.; Abdullah, L.; Zuniga, J.; Madison, S.; Maixner, W. Multiphasic effect of morphine on the release of substance P from the rat trigeminal nucleus slices. Brain Res, 579:187-194, 1992.
18. *Zuniga, J.R. Current advances in anesthesia and pain control research: Neurotransmitter receptor interactions with clinical relevance. OMFS Clin North Amer, (4:875-885), 1992.
19. *Zuniga, J.R.; LaBanc, J.P. Advances in microsurgical nerve repair. J Oral Maxillofac Surg, (suppl 1), 51: 62-68, 1993.
20. *Blakey, G.H.; Zuniga, J.R. Lingual nerve injury associated with superior border wire fixation. Int J Adult Orthod Orthognath Surg, 7:115-117, 1992.
21. *Buckley, M.J.; Zuniga, J.R., Nerve Dysfunction. OMFS Clin North Amer, 5:137-144, 1993.
22. *Zuniga, J.R., Davis, S.H., Englehardt, R.A., Miller I.J., Schiffman, S.S., Phillips, C: Taste Performance on the Anterior Tongue Varies with Fungiform Taste Bud Density. Chem Senses, 18:449-460, 1993.
23. *Zuniga, J.R: Long-term Observation of the Relation Between Pain Intensity and Serum Carbamazepine Concentration in Elderly Patients with Trigeminal Neuralgia: Discussion. J Oral Maxillofac Surg, 51: 1344-1345, 1993.
24. *Zuniga, J.R., Chen, N., Miller, I.J.: Effects of Chorda-Lingual Nerve Injury and Repair on Human Taste. Chemical Senses, 19: 657-665, 1994.
25. *Zuniga, J.R., Leist, J.C.: Topical Tetracycline-Induced Neuritis: A Case Report. J. Oral Maxillofac. Surgery, 53: 196-199, 1995.
26. *Leist, J.C., Zuniga, J.R., Chen, N., Gallehoun, S.: Experimental Topical Tetracycline-induced Neuritis in the Rat.. J. Oral Maxillofac. Surg., 53:427-434, 1995.
27. *Zuniga, J.R., Chen, N., Phillips, C.L.: Chemosensory and Somatosensory Regeneration of the Lingual Epithelium Following Lingual Nerve Repair in Humans. J. Oral and Maxillofac. Surg., 55: 2-13, 1997.
28. *Wagner, A., Ploder, O., Zuniga, J., Undt, G., Ewers, R.: Augmented Reality Environment for Temporomandibular Joint Motion Analysis. Int. J. Adult Orthod. Orthognath. Surg., 11:127-136, 1996.

29. *Anand, K.A., Zuniga, J.R.: Effect of Amiloride on Suprathreshold NaCL, LiCL and KCL Salt Taste in Humans. *Physiol. Behav.* 62:925-929, 1997.
30. *Chen, N., Zuniga, J.R.: Evaluating Methods and Effects of Repairing Injured Lingual Nerves in Humans. *Chin. J. Stomatol.* 32:288-290, 1997
31. *Parworth, L.P., Frost, D.E., Zuniga, J.R., Bennett, I.D.: Propofol and Fentanyl Compared to Midazolam and Fentanyl During Third Molar Surgery. *J. Oral Maxillofac. Surg.*, 56:447-453, 1998.
32. *Jacks, S.C., Zuniga, J.R., Turvey, T.A., Schalit, C.: A Retrospective Analysis of Lingual Nerve Sensory Changes Following Mandibular Bilateral Sagittal Split Osteotomy. *J. Oral Maxillofac. Surg.*, 56:700-704, 1998.
33. *Feldman, J.A., Essick, G.K., Zuniga, J.R., Phillips, C: Inter-examiner Reliability of Three Subjective Clinical Neurosensory Tests. *Int. J. Adult Orthod. Orthognathic Surg.*, 12:273-285, 1998.
34. *Zuniga, J.R., Meyer R.A., Gregg, J.M., Miloro, M.D., Davis, L.A.: The Accuracy of Clinical Neurosensory Testing For Nerve Injury Diagnosis. *J. Oral Maxillofac. Surg.*, 56:2-8, 1998.
35. *Zuniga, J.R.: The Use of Non-Opioid Drugs in Management of Chronic Orofacial Pain. *J Oral Maxillofac Surg*, 56:1075-1080, 1998.
36. *Zuniga, J.R.: Trigeminal Ganglion Cell Response to Mental Nerve Transection and Repair in the Rat. *J Oral Maxillofac Surg*, 57: 427-437, 1999.
37. *Zuniga, J.R.: Evaluation of Inferior Alveolar Nerve Function During Distraction Osseogenesis in the Dog. (Discussion). *J Oral Maxillofac Surg* 56:1424-1425, 1998.
38. *Zuniga, J.R.: Current Pain Research: The Genetics of Pain. *Oral Maxillofac Surg Clin North Amer.* 12:335-342, 2000.
39. Zuniga, J.R.: Guidelines for Anxiety Control and Pain Management in Oral and Maxillofacial Surgery. *J Oral Maxillofac Surg*, 58:4-7, 2000.
40. *Zuniga, J.R.: Challenging the Neuralgia-Inducing Cavitation Osteonecrosis Concept. *J Oral Maxillofac Surg*. 58: 1021-1028, 2000
41. Zuniga, J.R.; Gregg, J.M.: Clinical Trials in Orofacial Neurotrauma: Preface. *Oral Maxillofacial Surg Clinics North America* 13: xi - xii, 2001
42. Zuniga, J.R.: Zenn, M.R.: Principles of Microsurgery. *Oral Maxillofacial Surg Clinics North America* 13:331-342, 2001.
43. Gregg, J.M.; Zuniga, J.R.: An Outcome Analysis of Clinical Trials of the Surgical Treatment of Traumatic Trigeminal Sensory Neuropathy. *Oral Maxillofac Surg Clinics North America* 13: 377-381, 2001
44. Zuniga, J.R.: Surgical Management of Trigeminal Neuropathic Pain. *Atlas Oral Maxillofac Surg Clinics N.A.* 9:59-75, 2001
45. *Hegtvædt, Al, Zuniga, J.R., Rath, E.: Peripheral Sensory Regeneration with Biodegradable Materials and Neurotropic Factor. *Oral Maxillofac Surg Clinic, N.A.* 14: 1-16, 2002
46. *Dionne, R.A., Yagiela, J.A., Moore, P.A., Gonty, A., Zuniga, J.R., Beirne, O.R.: Comparing Efficacy and Safety of Four Intravenous Sedation Regimens in Dental Outpatients. *JADA* 132:740-751, 2001.

47. *Zenn, M.R., Zuniga, J.R.: Treatment of Fibrous Dysplasia of the Mandible with Radical Excision and Immediate Reconstruction: Case Report. *J Craniofac Surg* 12:259-263, 2001.
48. *Zuniga, J.R., Phillips, C.L., Shugars, D, Lyon, J.A., Peroutka, S.J., Swarbrick, J: Analgesic Safety and Efficiency of Diclofenac Sodium Softgels in Postoperative Dental Pain. *J Oral Maxillofac Surg* (accepted), 2003
49. *Bencharit S, Zuniga JR, Minsley G: Surgical and Prosthodontic Rehabilitation for a Patient with Aggressive Florid Cemento-Osseous Dysplasia: a Clinical Report. *J Prosth Dent.* 90:220-224, 2003.
50. *Zuniga JR, Christensen S, Campbell JH, Glickman R, Malmstrom H, Noveck R, Tomasetti B: Diclofenac Potassium Soft Gelatin Capsules for the Treatment of Moderate to Severe Postoperative Dental Pain. *JADA* (submitted), 2003.

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INSTRUCTIONAL UNITS and BOOK CHAPTERS

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GRANTS AND CONTRACTS

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| 1987-1988 | ----"Generation of antisera for the study of central endogenous neuronal peptides." |
| 1987-1989 | NIDR, R03 DE08272, "Regeneration after mandibular nerve section and repair." |
| 1987-1990 | NIDR, N01 DE72567, "Clinical evaluation of the relative efficacy and safety of intravenous premedication in dentistry." |

- 1989-1990 ---, Teacher Training Fellowship "Peripheral sensory nerve regeneration following repair with a tubular prosthesis."
- 1989-1990 ---, Research Fellowship Award "Peripheral sensory nerve regeneration following repair with a tubular prosthesis."
- 1989-1992 ---, Research Support Grant "Characterization of sensorimotor impairment subsequent to microsurgical repair of the lingual and inferior alveolar nerve in humans."
- 1992-1994 --- Research Training Award for Health Professions Students,
- 1992-1995 NIH-NIDCD, R03 DC01473-01A1, "Human Chemosensory Performance and Taste Bud Density,"
- 1992-1995 NIH-NIDR, R03 DC10141-01A1 "Chorda-Lingual Nerve Injury and Chemosensory Performance,"
- 1993-1994 ---, Research Training Award for Health Professions Students
- 1995-2000 NIH-NIDR, RO1, DE10028-02A, "Psychosocial versus Clinical Responses to Orthognathic Surgery"
- 1996-1998 ---, Research Training Award for Health Profession Students
- 1996 ---, NP-96-02, Dental Pain Pilot Study II
- 1999-2000 ---, The Safety and Efficacy of Diclofenac Sodium Softgels in Healthy Human Subjects with Dental Pain Following Third Molar Extraction
- 2001-2005 NIH-NIDCR RO1: Sensory Re-Training Following Orthognathic Surgery.
- 2002 ---, Phase III study: "A Phase III, Randomized, Parallel-Group, Double-Masked, Single-Dose Study of the Safety and Efficacy of Diclofenac Potassium Softgel 25mg and 50mg in the Treatment of Orthodontic Discomfort in Pediatric Patients"
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- 2002-2005 ---, "Psychophysical Assessment of Subjective Components of Texture Perception"